

AMENDMENT TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (currently amended): A method for forming a consumable electrode ~~electrodes~~ from metal chip scraps, the steps comprising:

crushing said metal chip scraps into particles;

cleaning said particles;

vacuum-thermal degassing ~~(VTD)~~ said particles

at a temperature in the range of 550 to 650 deg C and vacuum pressure of about 5×10^{-3} mm of mercury for a time in the range of 1 to 2 hours,

and maintaining said vacuum pressure while said particles cool to about 200 deg C, and then cooling said particles to about ambient temperature;

cold pressing said particles into briquettes;

placing said briquettes into a mould, said mould having sufficient remaining space to receive the addition of molten metal alloy;

pre-heating said mould with briquettes therein, prior to addition of molten metal alloy, ~~up~~ to a temperature sufficient to assure adhesion of said briquettes to said molten metal alloy;

filling said remaining [mould] space with said molten metal alloy;

cooling said mould and consumable electrode formed therein to ambient temperature.

Claim 2 (currently amended): The method in accordance with claim 1, wherein said particles have ~~partieles~~ sizes are in the range of 5 -20 mm.

Claim 3 (original): The method in accordance with claim 1, wherein said cleaning step comprises degreasing said chip scraps; washing and drying said degreased chip scraps; subjecting said dry chip scraps to magnetic separation.

Claim 4 (cancelled):

Claim 5 (original): The method in accordance with claim 1, wherein the relative density of said briquettes is in the range of 0.6 - 0.75.

Claim 6 (currently amended) The method in accordance with claim 1, wherein said ~~mould~~-pre-heating is at a temperature ~~is selected from temperatures~~ in the range of 400 - 450 deg C.

Claim 7 (currently amended): The method in accordance with claim 1, further comprising ~~the step of introducing~~ cooling the mould with inert gas ~~into the furnace holding the mould~~ after said ~~molten alloy~~ filling step ~~, to lessen the cooling time.~~

Claim 8(original): The method in accordance with claim 7,
wherein said inert gas is chosen from the group consisting
of helium and argon.

Claim 9(original): The method in accordance with claim 1,
wherein said metal is titanium.